among rural women. The study also tried to identify the awareness, perceptions & attitude towards breast cancer & mammography use among these women.

Methods Breast cancer educational sessions were conducted by trained health workers. Women were later contacted at their homes and invited to attend a CBE and mammography at the tertiary care centre at no cost. Those willing were provided transportation as well as assistance to attend the screening session.

Results A total of 599 women were screened over a span of 2 years (response rate =85%). Most of the participants were in the 40–50 age group (59.8%). Seventy nine per cent were unaware regarding the risk factors for breast cancer and nearly 60% were not aware of any breast cancer screening methods. Only 16% had heard of mammography earlier. Anxiety, pain and cost factor were some of the perceived barriers for mammography.

Conclusion In spite of poor awareness regarding breast cancer & its screening modalities participation was encouraging, demonstrating that a targeted intervention could bring about the required health seeking behaviour.

P2-212 ASSOCIATION BETWEEN THE RANK POLYMORPHISM AND THE NUMBER OF TEETH AMONG JAPANESE

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Introduction The receptor activator of nuclear factor- κ B (RANK), the receptor for RANK ligand, is a member of the tumour necrosis factor receptor superfamily and plays a central role in osteoclast development. There is little epidemiological evidence as to whether RANK polymorphisms influence oral health. This study investigated the association between the RANK polymorphism and the number of teeth among Japanese.

Methods We used baseline data from the Shizuoka area in the Japan Multi-Institutional Collaborative Cohort Study. The analysis included 4927 subjects (3348 men, 1579 women; age range 35–69 years). The genotyping of the RANK polymorphism (rs12458117) was conducted using a PCR-based TaqMan method. The number of teeth was self-reported.

Results The mean tooth number was 24.2 ± 5.6 (range 0–28) and decreased with age ($p < 0.01$). The subjects with the GG genotype had significantly fewer teeth than those with the GA or AA genotype, after adjusting for sex, age and covariates ($p = 0.02$). In a multivariate analysis after adjusting for covariates, men with the GG (OR, 2.6; 95% CI 1.1 to 2.1) and GA (OR, 1.4; 95% CI 0.7 to 1.6) genotypes had a higher risk of having less than 20 teeth, as compared to those with the AA genotype. No significant OR was found in women.

Conclusion Our findings suggest that the RANK polymorphism is related to tooth loss among Japanese men.

P2-213 ASSOCIATION BETWEEN DIETARY PATTERNS AND SERUM C-REACTIVE PROTEIN AMONG JAPANESE MEN AND WOMEN

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Introduction Dietary pattern may influence the risks of cardiovascular disease, atherosclerosis, and type 2 diabetes through its effects on inflammation. We evaluated the association between dietary pattern and serum high-sensitivity C reactive protein (hs-CRP) in a Japanese population.

Methods In this cross-sectional analysis, we used baseline data from 3905 men and 5640 women (age 40–69 years) who participated in a population-based cohort study between November 2005 and December 2007. Participants with possible inflammation-related diseases, current analgesic use, high hs-CRP levels (≥ 3000 ng/ml) or extreme dietary energy intake were excluded. We used 46 items from a validated short food frequency questionnaire and examined major dietary patterns by factor analysis.

Results We identified five dietary patterns: healthy (high in vegetables and fruit), Western (high in meat and fried foods), seafood (high in shellfish, squid, fish, etc), bread (high in bread and low in rice), and dessert (high in confections and fruit). After adjustment for age, alcohol use, smoking, physical activity, and body mass index, hs-CRP levels in men were inversely associated with the healthy, bread, and dessert patterns (p -trend: 0.02, 0.06, and 0.001, respectively) and positively associated with the seafood pattern (p -trend=0.03). In women, hs-CRP levels were inversely associated with the healthy pattern (p -trend=0.07) and positively associated with the Western pattern (p -trend=0.06).

Conclusions The healthy dietary pattern may be associated with suppressed inflammation in Japanese men and women, independently of body mass index and other factors. The sex-specific associations of hs-CRP with other dietary patterns (eg, the seafood pattern) require further study.

P2-214 RICE INTAKE AND TYPE 2 DIABETES IN JAPANESE MEN AND WOMEN: THE JAPAN PUBLIC HEALTH CENTER-BASED PROSPECTIVE STUDY

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Introduction Refined carbohydrates have been suggested to deteriorate glucose metabolism; however, whether persons with elevated intakes of white rice, a major staple food for the Japanese, experience increased risk of developing type 2 diabetes remains unclear. We prospectively investigated the association between white rice intake and risk of type 2 diabetes.

Methods Participants were 25 666 men and 33 622 women aged 45–75 years who participated in the second survey of the Japan Public Health Center-based Prospective Study and had no prior history of diabetes. We ascertained food intake by using a validated 147-item food frequency questionnaire. ORs of self-reported physician-diagnosed type 2 diabetes over 5 years were estimated by using logistic regressions.

Results A total of 1103 new cases of type 2 diabetes were self-reported. Rice intake was significantly associated with an increased risk of type 2 diabetes in women; the multivariate-adjusted OR for the highest compared with lowest quartiles of rice intake was 1.65 (95% CI 1.06 to 2.57; p for trend =0.005). In men, the association was unclear, although there was a suggestion of a positive

association among persons who were not engaged in strenuous physical activity (p for trend = 0.08).

Conclusions Elevated intake of white rice is associated with an increased risk of type 2 diabetes in Japanese women. The finding suggestive of a positive association of rice intake among physically inactive men deserves further investigation.

P2-215 MORTALITY DUE EXCLUSIVELY TO DISEASES FULLY ATTRIBUTABLE TO ALCOHOL CONSUMPTION IN 2006 IN BRAZIL: EFFECTS OF GENDER, EDUCATION AND ETHNICITY

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Introduction Diseases fully attributable to alcohol consumption, as mental and behavioural disorders and alcoholic liver disease, are important causes of morbidity and mortality around the world, especially among men. Some studies show higher mortality rates among black people, but in Brazil there are discussions if this finding shows a real association with ethnicity or if socioeconomic status is the leading exposure.

Methods Mortality data and estimated resident population for all Brazilian territory, stratified by age, sex, ethnicity and years of formal education (surrogate for socioeconomic status) were obtained from the Brazilian Mortality Information System (SIM) for 2006. Age-standardised mortality rates were calculated by the direct method using the 2000 Brazilian population.

Results During 2006, 23 608 deaths were due exclusively to alcohol-attributable diseases in Brazil (2.4% of total deaths in the country). Men were 89.0% of subjects. Highest proportion of deaths was observed among people with less than 3 years of formal education. Black men with less than three years of formal education had the highest age-adjusted mortality rate (20.37 deaths/100 000 men), followed by black men with more than 3 years of education (11.04). Among white men the age-adjusted mortality rates were 8.43 and 8.57 for these levels of education, respectively. Black women with less formal education showed higher age-adjusted mortality rate (5.82) than black women with more years of formal education (2.59) and white women.

Conclusions Our findings suggest there are important differences in mortality rates related to education and ethnicity for men and women in Brazil.

P2-216 FACTORS ASSOCIATED WITH HOUSEWIVES OBESITY IN IRAN; A NATIONAL SURVEY: STEPS 2005

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Background We compared obesity risk and its contributors in housewives (HWs) to employees, as a larger portion of women work as housewives in Iran.

Methods Based on the WHO stepwise approach, a cross-sectional survey undertaken throughout Iran in 2005 (33 472 women aged 15–65 years) was used to investigate the major risk factors for obesity. Obesity was determined by BMI $>30 \text{ kg m}^{-2}$ in adults

(>20 years) and by female BMI percentiles according to WHO 2007 Growth Reference 5–19 years in adolescents (<20 years). We modelled obesity by logistic regression and entered all the known/potential predictors, including job categories. Weighted prevalence of obesity was calculated by survey analysis series of STATA.

Results The weighted prevalence of overweight and obesity in HWs were 34.5% and 24.5% respectively. Employed women were approximately 4% less overweight and 10% less obese than HWs ($p<0.01$). HWs vs employed women had the adjusted OR 1.39 (95% CI 1.18 to 1.63) for obesity. Older women, with higher educational level and socioeconomic status, lower physical activities and those living in urban areas were at higher risk of obesity. In comparison to HWs, working as an Official Clerk was associated with a significant decrease (OR=0.66) odds of obesity, while other employments didn't show a significant association.

Conclusion Working as HW is a significant independent risk factor for obesity in women. Preventive healthcare programs to reduce risk of obesity in women should be targeted by occupation in order to achieve maximum effectiveness.

P2-217 TRENDS IN INCIDENCE AND CASE-FATALITY OF ACUTE MYOCARDIAL INFARCTION IN CHILE, 2001–2007

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Introduction In Chile, coronary heart disease is the main cause of death in men and the second in women. Acute Myocardial Infarction (AMI) causes 73.6% of coronary heart disease deaths registered in Chile and its incidence is unknown. Aim: to estimate incidence and case-fatality of AMI in Chile and analyse their trends between 2001 and 2007.

Methods All cases of AMI (according to the ICD-10, I21 code), registered in the National Hospitalisations and Death databases, were analysed. Annual incidence rates and case-fatality by sex and age groups were calculated. Direct method was used to standardise rates by age, using the WHO 2000 Population. Poisson regression models were used to evaluate trends, expressed as relative change.

Results Between 2001 and 2007 we estimated that 83 754 cases of AMI occurred. Standardised mean annual incidence rate was 74.4 per 100 000 inhabitants (98.0 in men and 51.0 in women). Incidence rates increased by 35% in the age group <45 years and 9.2% in the group of 55–64 years ($p<0.001$, both). Total case fatality was 49.5% (45.4% in men vs 57.2% in women; $p<0.001$). Trend analysis showed a significant annual reduction of 1.2% in men and 0.81% in women. In-hospital case fatality was 14.2%, higher in women (11.3% vs 20.4% $p<0.001$); annual reduction was 0.57% in men and 1.01% in women ($p<0.05$ both).

Conclusion AMI incidence was stable, although in younger age groups it increased. Case-fatality decreased both total and in-hospital. Despite the greater reduction in women, they still have a higher risk of in-hospital case-fatality.

P2-218 SECONDARY PREVENTION IN ACUTE MYOCARDIAL INFARCTION IN CHILE

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Background In 2005 the Chilean government started a healthcare reform that guarantees medical treatment for patients with acute myocardial infarction (MI), including secondary prevention.